

REMARKS/ARGUMENTS

Claims 21-40 were pending in the application. Claims 23, 36 and 39-40 have been canceled and claims 21, 24, 25, 30, 32, 37, and 38 have been amended. Applicant respectfully requests reconsideration.

CLAIM REJECTIONS UNDER 35 U.S.C. §112

Claims 21-35 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Applicant respectfully traverses this rejection. First, the Office Action contends that the application does not support storing only minimally used portions of information. Although Applicant believes that those skilled in the art would understand that this limitation defines an invention clearly possessed by the inventor as evidence by the original specification, this limitation has been deleted from claim 21 without prejudice.

Claims 21-35 and 40 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Office Action contends that there is no support in the specification for the "first level **always** consuming more energy." For purposes of expediting prosecution of this application, has canceled this limitation from the claims at issue; however, Applicant disagrees and points to paragraphs [0022], [0023], [0025], and the Abstract for support:

"[0022] According to an embodiment of the invention the energy-conserving issues discussed above are solved by using a second level storage device (in the following, briefly referred to as cache), **that consumes less energy than the first level** (main system storage) in circumstances where power savings are desired. The existence of such circumstances is determined by reference to energy-conserving criteria (defined herein). An ideal system would use this additional level of memory ("intermediate storage") to reduce the amount of access to the "main storage" while maintaining data integrity. This memory would usually be non-volatile, such as Flash memory. This would be an advantage as it would increase battery life to the system. In addition, it could add a level of redundancy to critical data for protection from HDD failures."

“[0023] Moreover, according to another embodiment of the invention, the wearability and latency issues of Flash are solved by an apparatus and method which stores only strategically selected storage data in a second level of storage (such as a Flash cache) **that consumes less energy than storage in a first storage level** such as main system storage. It should be noted that the cache could be based on any type of storage device, including those mentioned above, and that this cache may be accessed in many different ways, including through a network.”

“[0025] It is known that accessing a main storage device such as HDD 106 **consumes more energy** than accessing information stored in random-access media such as the main memory 104.”

Abstract: “An information processing system comprises first and second levels of a storage hierarchy, **wherein accessing information in the first level consumes more energy than accessing information in the second level**; and a processor for writing information to the second level of storage based on energy-conserving criteria. The energy-conserving criteria comprise a set of heuristics, including system state information and user preferences.”

CLAIM REJECTIONS UNDER 35 U.S.C. §102

The final Office Action rejected claims 21-26, 29-31, 33, and 37-38 under 35 U.S.C. §102 as being anticipated by US Patent Application No. 2004/0255283 issued to Rudelic et al. (hereafter, “Rudelic”).

Claim 21 has been amended to include a limitation previously in claim 25 which was not found by the Office Action to be anticipated by Rudelic. Thus, the rejection of claim 25 did not even mention the limitation of “wherein the energy-conserving criteria comprise a type of energy source powering the system.” Therefore, the Examiner has not carried the PTO’s burden of establishing a *prima facie* case of anticipation of claim 25 and hence of claim 21 as amended.

Moreover, as previously pointed out, energy-conserving criteria are not the same as power conserving criteria. In response to this basic and undeniable truth the Examiner

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responded by improperly importing the limitation of a fixed access time (T). This is improper because nowhere in the claim is there a limitation that access time be held constant.

Claims 22-35 are dependent on claim 21 and are not anticipated for at least the same reasons as discussed herein. Claim 36 has been canceled, without prejudice, thus mooting its rejection.

Independent claim 37 has been amended to incorporate the step of “storing all storage data in non-managed non-volatile storage when the operating state of the system does not satisfy the one or more energy-conserving criteria.” This limitation is also found in claim 38 and is missing from the prior art.

Page 6 of the Office Action discusses the rejection of claim 38 and completely omits any mention of “storing all storage data in non-managed non-volatile storage when the operating state of the system does not satisfy the one or more energy-conserving criteria.” The absence of this limitation from the cited art establishes that there is no anticipation and no obviousness.

Claim 38 is also not anticipated by Rudelic because Rudelic does not teach or suggest any use of energy-conserving criteria which are used in each element of claim 38.

CLAIM REJECTIONS UNDER 35 U.S.C. §103.

The Office Action rejected claims 27 and 28 as unpatentable over Rudelic in view of Thelander (U. S. Patent Application 2003/0009705).

Claims 27 and 28 are dependent on claim 21 which now includes a limitation that the Office Action did not contend is found in any of the cited references.

Moreover, the Office Action admits that Rudelic is silent on (i.e., does not teach) that the system stores current user profiles and the system state information comprises whether storage input/output data are associated with a current user profile but alleges that Thelander suggests those limitations. Thelander is concerned with power conservation. As shown above, power conservation is not the same, or the equivalent of, energy conservation. Therefore, the combination of Rudelic and Thelander do not teach or suggest the use of energy-conserving criteria (as claimed in claim 21, from which claims 27 and 28 depend).

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For the foregoing reasons, Applicant respectfully requests allowance of the pending claims and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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